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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/986,671	11/09/2001	Masayoshi Nakamura	2001_1660A	5826

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EXAMINER

PSITOS, ARISTOTELIS M

ART UNIT PAPER NUMBER

2653

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/986,671

Applicant(s)

NAKAMURA ET AL.

Examiner

Aristotelis M Psitos

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,11 and 12 is/are rejected.
- 7) ☒ Claim(s) 3-10 and 13-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 18 June 04
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Applicants' response of 6/18/04 has been considered with the following results.

The amendment to the title of the invention is greatly appreciated and has been entered.

With respect to the IDS, the examiner regrets the un-initialed form, and attached hereto is a Initialed form.

Claim Objections

The objection to the claims is maintained. The examiner has interpreted these claims as falling to comply with present USPTO practice in writing dependent claims – see the requirement as stated in 35 USC 112 paragraph 5, "an element in a claim for a combination may be expressed as a means or step for performing a specified function ...". The present dependent (3-10 and 13-20) claims do not comply with such.

Applicant is advised that should claims 3-10 be found allowable, claims 13-20 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). See the below analysis of the independent claims.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 1 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh further considered with Leonowich and both further considered with Ishibashi et al for the reasons stated in the previous OA.

In addition, the following analysis is made:

Claim 1

A clock extracting device of a disc reproducing apparatus, comprising:

Katoh/Leonowich/Ishibashi

abstract Katoh

inherent see col 1 lines 5-15

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an information read-out means for reading
information signals from a disklike
information recording medium;

a voltage control oscillator;

element 11 in Katoh/element 20 in

a phase comparator for comparing

Leonowich

a phase of the information signals read by the
information read-out means and a phase of an
output of the voltage control oscillator;

a frequency comparator for comparing

element 6 in Katoh

a frequency of the information signals read
by the information read-out means and

a frequency of the output of the voltage control oscillator;

a speed sensor for detecting the frequency
of the output of the voltage control
oscillator at a reference clock so as to
output a speed signal;

element 22 Leonowich/

see Ishibashi et al/col.

12 lines 43 plus

a gain command unit for designating
a loop gain of a clock extracting circuit in
accordance with the speed signal outputted
from the speed sensor;

element 22.2 in Leonowich

a charge pump which discharges
or draws electric current in accordance with

element 16 in Leonowich

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outputs of the phase comparator and the frequency comparator and changes over an output current value in accordance with a gain command of the gain command unit; and

a series circuit of a resistor and a capacitor, element 18 in Leonowich whose one end is connected to an output of the charge pump and the other end of which is grounded or is connected to a reference voltage;

wherein an output voltage between the opposite ends of the series circuit acts as a yes

control voltage for the voltage control oscillator and the gain command unit issues the gain command such that the loop gain of the clock extracting circuit secures a desired operating point in accordance with a read rate of the information signals.

As stated in the previous OA, Katoh is relied upon as presented in the submitted search report, for teaching in this environment the overall system relying upon pll and phase and frequency comparators.

As noted above Leonowich is relied upon for teaching the particular of the charge pump element, the gain command unit and the series circuit.

It would have been obvious to modify the base system of Katoh with the above teachings from Leonowich; motivation is for the reasons stated in Leonowich.

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Although the gain is appropriately controlled predicated upon data density, there is no specific mentioning of a "speed" detector.

Ishibashi et al discloses the ability of altering the gain of the pll predicated upon the detected linear velocity – again see col. 12 lines 43 plus.

It would have been obvious to modify the base system of Katoh and Leonowich with the above teaching from Ishibashi et al, motivation is to appropriately control the gain with respect to the linear velocity (speed) of the signal and hence appropriately provide for a corrected output signal.

With respect to claim 11, this independent claims differs from claim 1 only in that instead of an information read out means for reading the information from the disklike medium, "an optical pickup operable to read" is recited. As noted in the base reference to Katoh in lines 5-15 since the invention relates to an optical disc device the examiner concludes that the claimed "an optical pickup operable to read the information is inherently present.

Response to Arguments

Applicant's arguments filed 6/18/04 have been fully considered but they are not persuasive. Applicants' arguments focus upon one embodiment of the Ishibashi et al system. The examiner relies upon the other embodiment that supports his position – also see the Ishibashi et al document 6611480 – abstract and col. 16 lines 1-5. A reference must be evaluated for all that it teaches – **In re Bode et al 193 USPQ 12.**

2. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katoh considered with Leonowich both considered with Ishibashi et al and all further considered with Okada et al.

Katoh, Leonowich and Ishibashi et al are relied upon for the reasons stated above.

Claim 2 differs from claim 1 in that it recites a digital filter and NCO. As noted in Okada et al, Okada et al teach these elements – see figure 22.

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It would have been obvious to modify the base system of Katoh/Leonowich/Ishibashi et al with the above additional teachings from Okada et al; motivation is to provide a digitized pll and its inherent improvement.

With respect to claim 12, it differs from claim 2 in that it recites "an optical pickup" as opposed to claim 2 recitation of "an information read out means". Since the base reference is drawn to an optical system, the examiner concludes such an element is inherently present.

Response to Arguments

Applicant's arguments filed 6/18/04 have been fully considered but they are not persuasive. Applicants' further argue that the multiplier of claim 2 has not been addressed in the rejection.

The examiner regrets his lapse in articulation of such an element, nevertheless, such an element and its use in this environment is present in the Ishibashi et al reference – see element 10, which is a multiplier.

Allowable Subject Matter

3. Claims 3-10 and 13-20 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims as well as correct for the above objection(s) thereto.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Shimada is cited as another pll having gain control predicated upon speed variations/selection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date

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of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aristotelis M Psitos whose telephone number is (571) 272-7594. The examiner can normally be reached on M-Thursday 8 - 4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William R. Korzuch can be reached on (571) 272-7589. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Aristotelis M Psitos
Primary Examiner
Art Unit 2653



AMP